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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,622	05/10/2001	Peter M. Will	06666/033002/USC 2857	4658

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FISH & RICHARDSON, PC
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EXAMINER

SHAFFER, RICKY D

ART UNIT	PAPER NUMBER
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2872

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/681,622

Applicant(s)

WILL, PETER M.

Examiner

Ricky D. Shafer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/26/2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 4, 6-18, 20-25 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 19, 26 and 28-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/06/2006 has been entered.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 19, 26, 28, 29 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 19, lines 3-6, the use of the language "arranged such that...reflector elements" is misdescriptive of the operation of the species, depicted by Fig. 2, due to the fact that each of the plurality of the reflector elements (205, 220, 240) would appear to reflect "away from" another of the plurality of the reflector elements. For example, consider mirrors 220 and 240, light incident on mirror 220 is reflected downwardly, and away, from the reflective surface of mirror 220 to mirror 199. Since, mirror 240 is positioned more rearwardly than mirror 220, the light reflected from mirror 220 must be traveling further, and further away from mirror 240. In fact, once the reflected light is incident onto mirror 199, mirror 199 further reflects the light "toward" mirror 240. Thus, light must be traveling closer, and closer to mirror surface 240 in order to be incident thereon. Accordingly, the examiner is of the opinion that the above mentioned language "toward another" is misdescriptive and the device is only capable of operating in the manner

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recited by applicant when the movable reflector elements (205, 220, 240) are provided in combination with element 199. thus, the metes and bounds of the claim is unclear.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 31 and 33-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Leddy et al ('493).

Leddy et al discloses an optical device comprising a source (24) for supplying an input optical beam to an array of movable reflector/mirror elements-DMD (28), see column 3, lines 15-20 along with figures 1b and 1c, wherein said input optical beam is reflected by said array of movable reflector/mirror elements to form an output optical beam at location (26), as shown in Fig. 1a, wherein the device is certainly capable of operating and providing an output beam at location without other beams surrounding said location, when the mirrors are operated at the second voltage level (see column 4, lines 46-52) and a scene generator/interface (21,48) for controlling said array of reflector/mirror elements in a digital mode (column 3, lines 32-37 and column 4, lines 47-60), wherein said scene generator/interface generates multiple digital bits for each of the individual reflector/mirror elements of the DMD (see column 3, lines 20-27, column 5, lines 19-22 and column 6, lines 35- 67), based on each change of each single digital bit of said multiple digital bits, which selectively controls said reflector/mirror elements and thus changes the location where said output beam is directed, wherein there is inherently at least two different possible locations, an on position and an off position, as well as more than one bit, an address bit and a voltage (on/off) bit. Note Figures 1a to 12 along with the associated description thereof.

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leddy et al ('493) in view of Lin et al ('869).

Leddy et al discloses all of the subject matter claimed, note the above explanation, except for explicitly stating that the array of reflector/mirror elements having different sizes.

Lin et al teaches it is well known to employ different sizes for reflector/mirror elements in the same field of endeavor for the purpose of changing the phase of a wave front of a beam.

Therefore, it would have been obvious and/or within the level of one of ordinary skill the art at the time the invention was made to modify the reflector/mirror elements of Leddy et al to include different sizes, as taught by Lin et al, in order to change the phase of a wave front of a beam so as to increase the processing of information.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky D. Shafer whose telephone number is (571) 272-2320. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RDS

January 07, 2006

Rich D. Shafer
RICKY D. SHAFER
PATENT EXAMINER
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